

OVERVIEW INFORMATION

The Air Force Office of Scientific Research (AFOSR) announces a fiscal year 2007 competition for research to promote and sustain university research and education focused on small satellites (nanosats) and related technologies. The program description is found in Section I of this announcement. It is expected that multiple awards will be made.

- 1. Agency Name:** Air Force Office of Scientific Research (AFOSR)
875 N. Randolph St.
Suite 325, Room 3112
Arlington, VA 22203
- 2. Funding Opportunity Title:** University Nanosat Program
- 3. Announcement Type:** Modification to AFOSR BAA 2006-06, changes due date for receipt of proposals
- 4. Funding Opportunity Number:** AFOSR BAA 2006-06, Modification 1
- 5. Catalog of Federal Domestic Assistance (CFDA) Number:** 12.800
- 6. Response Dates:** To receive maximum consideration proposals should be received at AFOSR by 3:00pm EST, 16 October, 2006 (CHANGE)

FULL TEXT OF ANNOUNCEMENT

I. Funding Opportunity Descriptions

AFOSR, in conjunction with the AFRL Space Vehicles Directorate (AFRL/VS), NASA Goddard Space Flight Center (GSFC) and the American Institute of Aeronautics and Astronautics (AIAA), announces a program to promote and sustain university research and education focused on small satellites (nanosats) and related technologies. The primary outcome of individual projects funded under this program is the design, fabrication and functional testing of a nanosat. Secondary objectives are to foster research in enabling technologies for nanosats and the design of experiments that can be performed by nanosats in orbit. In a related activity, AIAA will sponsor a competition to select a small number of nanosats for space launch and operation. AFRL/VS will work actively with program participants to promote space-worthy design and fabrication and to prepare selected nanosats for launch.

Teaming by a maximum of two universities is an acceptable option. In this case, each university must produce its own nanosat and must apply individually to AFOSR. Individual grants will be made to each university. The team of universities will share as a team the constraints of a single entry into the nanosat competition, thereby splitting available design space between team members. Each such proposal should detail the overall team objectives and the role of each university. One institution should be indicated as the Point of Contact (POC) for team operations.

Proposing universities may elect to design experiments to be performed (should there ultimately be a launch) on the nanosat, including the demonstration of novel space technologies. To determine which technologies and demonstrations are of interest to the participating agencies, contact Kent Miller at Kent.Miller@afosr.af.mil. The incorporation of such technologies is not mandatory for proposals. However, this may affect one of the evaluation criteria. (See below).

For this program 'nanosat' will be used to indicate satellites having a mass of no more than 50 kg and with linear dimensions of 60x60x50 cm or less. These restrictions are chosen to maintain a focus on small satellites, to keep project costs reasonable and to facilitate the potential launch of the nanosat. It is anticipated that several awards will be made. The plan is to hold both the AFOSR solicitation and the AIAA competition on a two year cycle.

II. Award Information:

Subject to the availability of funds and selection of adequate proposals, AFOSR anticipates awards is to be project grants. Each project will be funded at no more than \$55,000 per year for a maximum of two years. Collaborations with government agencies or industry are highly desirable.

III. Eligibility Information

1. Eligibility: This competition is limited to institutions of higher education with degree granting programs in science, mathematics and/or engineering. Collaborations with government agencies or industry are highly desirable.

Proposals are encouraged from Historically Black Colleges and Universities and Minority Institutions (HBCU/MI). However, no funds are specifically allocated for HBCU/MI participation.

2. Cost Sharing: Cost sharing is not required.

IV. Application and Submission Information

1. Address to Request Announcement Package – This announcement may be accessed from the Internet from the "Other Opportunities" portion of AFOSR's web site (<http://www.afosr.af.mil/>) through the "Need Funding?" link

2. Marking of Proposals - Every effort should be made to protect the confidentiality of the proposal and any evaluations. However, under the Freedom of Information Act (FOIA) requirements, such information (or portions thereof) may potentially be subject to release. The proposer must mark the proposal with a protective legend found in FAR Part 15.609, Limited Use of Data, (modified to permit release to outside evaluators retained by AFOSR) if protection is desired for proprietary or confidential information.

3. Content and Form of Application Submission –

Full Proposals. The proposal may be submitted either electronically or in hard copy form, but not both. All proposers must include the SF 424 (R&R) form as the cover

page. Proposals of more than 25 total pages, including cover page and budget, are discouraged.

Full Proposal Format

- Paper Size – 8.5 x 11 inch paper
- Margins – 1 inch
- Spacing – single or double spaced
- Font – Times New Roman, 10 or 12 point
- Page Limitation – 25 pages
- 10 Copies for hardcopy submissions – (one original, nine copies)
- Content – as described below

(1) Advanced Preparation For Electronic Submission - Electronic proposals must be submitted through Grants.gov. There are several one-time actions your organization must have completed before it will be able to submit applications through Grants.gov. Well before the submission deadline, you should verify that the persons authorized to submit proposals for your organization have completed those actions. If not, it may take them up to 21 days to complete the actions before they will be able to submit applications.

The process your organization must complete includes obtaining a Dun and Bradstreet Data Universal Numbering System (DUNS) number, registering with the Central Contract Registry (CCR), registering with the credential provider, and registering with Grants.gov. (Designating an E-Business Point of Contact (EBiz POC) and obtaining a special password called MPIN are important steps in the CCR registration process.) Go to http://www.grants.gov/applicants/get_registered.jsp. Use the Grants.gov Organization Registration Checklist at <http://www.grants.gov/section3/OrganizationRegCheck.pdf> to guide you through the process. If a proposal is submitted through Grants.gov, PureEdge Viewer will need to be downloaded. This small, free program will allow you to access, complete, and submit applications electronically and securely. For a free version of the software, visit the following web site: www.Grants.gov/DownloadViewer. Should you have questions relating to the registration process, system requirements, how an application form works or the submittal process, call Grants.gov at 1-800-518-4726 or support@Grants.gov.

(2) Submitting the Application

(a) For Electronic Submission – Application forms and instructions are available at Grants.gov. To access these materials, go to <http://www.grants.gov>, select “Apply for Grants”, and then select “Download Application Package”. Enter the CFDA number for AFOSR which is 12.800, Air Force Defense Research Sciences Program (AFOSR). You should also enter the funding opportunity number for this announcement (AFOSR BAA 2006-06). Then follow the prompts to download the application package.

(b) For Hard Copy Submission – For hard copy submission, the original proposal and nine copies must be delivered to the attention of the program manager at the Air Force Office of Scientific Research at the following address:

AFOSR/NE (Attn: Dr. Kent Miller)
Air Force Office of Scientific Research
875 North Randolph Street, Room 3112
Arlington VA 22203

(c) SF 424 Research and Related (R&R) - The SF 424 (R&R) form must be used as the cover page for all electronic and hard copy proposals. No other sheets of paper may precede the SF 424 (R&R) for a hard copy proposal. A signed copy of the SF 424 (R&R) should be submitted with all hardcopy proposals. Complete all the required fields in accordance with the “pop-up” instructions on the form and the following instructions for the specified fields. To activate the instructions, turn on the “Help Mode” in Grants.gov. (The “Help Mode” is turned on by the icon with the pointer and question mark. This is located at the top of the form). The completion of most of the fields is self-explanatory except the following special instructions:

- Field 2: In the Applicant Identifier area, please list the appropriate program officer to receive the proposal.
- Field 3: The State Application Identifier may be left blank.
- Field 7: Complete as indicated. Please note under “Other (Specify)” if your organization is a Minority Institution (MI).
- Field 8: Complete fields as indicated.
- Field 9: List AFOSR as the reviewing agency.
- Field 20: Use Field 20 to attach the proposal narrative as described below.

(d) Other forms: The following other forms must be used for all electronic and hard copy proposals. R&R Budget form, R&R Senior/Key Person Profile form, R&R Project/Performance Site Locations form and R&R Other Project Information form. These forms are available on the grants.gov site.

(e) Certification -

All awards require some form of certifications of compliance with national policy requirements.

For assistance awards, i.e., grants and cooperative agreements, proposers using the SF 424 (R&R) are providing the certification required by 32 CFR Part 28 regarding lobbying. (The full text of this certification may be found at http://www.afosr.af.mil/Documents/funding_GrantCertForm.htm or a copy will be provided upon request.)

(f) Proposal Narrative – Attach the proposal narrative to the SF 424 (R&R) cover sheet (for an application submitted through Grants.gov, electronically

attach the proposal narrative at Field 20). The proposal narrative contains the abstract, technical proposal, budget and supplementary information as follows:

- **Abstract.** Include a concise (not to exceed 300 words) abstract that describes the proposed research.

- **Technical Proposal.**

- Describe in detail the research to be performed keeping in mind the evaluation criteria listed in Section V of this announcement.

- Briefly address whether the intended research will result in environmental impacts outside the laboratory, and how the proposer will ensure compliance with environmental statutes and regulations.

- **Budget.** The financial portion of the proposal must contain a cost estimate for the proposed effort including a description of cost sharing arrangements, if any. It is anticipated that the awards will have an initial performance period of eleven months with one fourteen month option, assuming a 1 January 2007 effective date. However, the start date is subject to negotiations. Individual budgets should be provided for each period. Should a grant be awarded AFOSR will make payment to educational recipients based upon a predetermined payment schedule. Payments will normally be made quarterly in advance of performance, based upon a spending profile which must be provided as part of the proposal. Payments should be limited to the amounts needed to conduct research during each respective period. Educational and nonprofit organizations shall submit a spending profile with their cost proposal. For further details, proposers may refer to the "Proposer's Guide to AFOSR Research Programs" (http://www.afosr.af.mil/ResearchAreas/funding_submitProp.htm).

4. Other Submission Requirements

Proposals submitted in whole or in part by electronic media (computer disk or tape, facsimile machine, electronic mail, etc.) will not be accepted (unless the full proposal is submitted electronically through Grants.gov).

5. Application Receipt Notices.

a. For Electronic Submission - The applicant will receive a confirmation page upon completing the submission to Grants.gov. The applicant will receive an e-mail within a few hours of submission indicating that the proposal has been validated by Grants.gov. (This means that all the required fields have been completed.) The third notice the applicant will receive is an e-mail from the designated agency to which the electronic proposal was submitted, to acknowledge receipt of the proposal and provide the agency's assigned tracking number. The email is sent to the authorized representative for the applicant institution approximately ten days from the proposal due date.

b. For Hard Copy Submission – An applicant that submits a hard copy proposal to AFOSR will receive an e-mail from the agency approximately ten days after the proposal due date to acknowledge receipt of the proposal and provide the agency's assigned tracking number. The e-mail is sent to the authorized representative for the applicant institution

6. Submission Dates and Times. To receive maximum consideration proposals should be received at AFOSR by 3:00 PM, EST, **16** October 2006.

V. Application Review Information

AFOSR's overriding purpose in supporting this research is to advance the state of the art in areas related to the technical problems the Air Force encounters in developing and maintaining a superior Air Force; lowering the cost and improving the performance, maintainability, and supportability of Air Force weapon systems; and creating and preventing technological surprise.

Proposals submitted under this BAA are evaluated through a peer or scientific review process, and selected for award on a competitive basis according to Public Law 98-369, Competition in Contracting Act of 1984, 10 USC 2361, and 10 USC 2374. Proposals may be evaluated by program managers at the appropriate AFRL Technology Directorates. Additionally, proposals may be evaluated by outside evaluators retained by AFOSR which may include support contractor personnel. Proposals will be evaluated under the following two primary criteria, of equal importance, as follows:

1. The scientific and technical excellence of nanosat plans and objectives.
2. Relevant experience of the Principal Investigator and major associates.

Other evaluation criteria used in the technical reviews, which are of lesser importance than the primary criteria and of equal importance to each other, are:

1. Educational impact (both undergraduate and graduate) of the project.
2. Quality, relevance (to AFRL and NASA) of plans for space operations
3. The realism and reasonableness of proposed costs. (Cost sharing is not a factor in the evaluation.)

No further evaluation criteria will be used in source selection. The technical and cost information will be analyzed simultaneously during the evaluation process.

VI. Award Administration Information

1. Award Notices. Should your proposal be selected for award, the Principal Investigator will receive a letter from the Technical Directorate stating this information. This is not an authorization to begin work. Your business office will be contacted by the Grant Officer to negotiate the terms of your award.

2. Administrative Requirements. Title to equipment purchased under this program will be vested with the university without further obligation to the government. AFOSR's terms and conditions for grants are available at the AFOSR web page: www.afosr.af.mil.

3. Reporting Requirements. Grants typically require annual and final technical reports, financial reports, and final patent reports. Copies of publications and presentations should be submitted. In addition, design details may be called for, particularly for those entering the AIAA competition.

Two program reviews will be held each year at which each grantee will deliver a progress report.

Additional deliverables may be required based on the research being conducted.

VII. Agency Contacts

Should you have questions about a technical research area, contact the program manager, Dr. Kent Miller at kent.miller@afosr.af.mil or by phone at (703) 696-8573. Should you have questions about the BAA or procedures for submission of a proposal, contact Ricky Christie at (703) 696-5968 or ricky.christie@afosr.af.mil or Richard Pihl at (703) 696-9728 or richard.pihl@afosr.af.mil.

VIII. Additional Information

1. The cost of proposal preparation in response to this Announcement is not considered an allowable direct charge to any resulting award. Such cost is, however, an allowable expense to the normal bid and proposal indirect cost specified in FAR 31.205-18, or OMB Circular A-21, Cost Principles for Educational Institutions or OMB Circular A-122, Cost Principles for Nonprofit Organizations.
2. Every effort will be made to protect the confidentiality of the proposal and any evaluations. The proposer must mark the proposal with a protective legend in accordance with FAR part 15.6, Use and Disclosure of Data, if protection is desired for proprietary or confidential information.
3. Only Contracting or Grants Officers are legally authorized to bind the government.
4. Intellectual Property
 - a. Proposers shall identify all aspects of the intellectual property, technical data, hardware, and software that they plan to develop under this award for which the Government will acquire less than unlimited rights and to list specifically what the restrictions are. In the event that proposers do not submit such a list, the Government will assume that it automatically has unlimited rights to all intellectual property, technical data, hardware, and software developed under this award.
 - b. Proposers are advised that proposals containing restrictions on intellectual property are by nature less favorable and valuable to the government. Restrictions will be considered in the evaluation process. If no restrictions are intended, then the proposer should state this fact.
5. AFOSR documents are available on the AFOSR website at <http://www.afosr.af.mil>

6. Responses should reference Broad Agency Announcement AFOSR BAA 2006-06.

7. Prospective awardee shall be registered in the CCR database prior to award, during performance, and through final payment of any award resulting from this announcement. Offerors may obtain information on registration and annual confirmation requirements via the Internet at <http://www.ccr.gov> or by calling 1-888-227-2423, or 269-961-5757.